**ABSTRACT**

To provide a method of controlling a conductivity of a $Ga_2O_3$ system single crystal with which a conductive property of a $\beta$-$Ga_2O_3$ system single crystal can be efficiently controlled.

The light emitting element includes an n-type $\beta$-$Ga_2O_3$ substrate, and an an n-type $\beta$-$AlGaO_3$ cladding layer, an active layer, a p-type $\beta$-$AlGaO_3$ cladding layer and a p-type $\beta$-$Ga_2O_3$ contact layer which are formed in order on the n-type $\beta$-$Ga_2O_3$ substrate. A resistivity is controlled to fall within the range of $2.0 \times 10^{-3}$ to $8 \times 10^{2}$ $\Omega$cm and a carrier concentration is controlled to fall within the range of $5.5 \times 10^{15}$ to $2.0 \times 10^{19}/cm^3$ by changing a Si concentration within the range of $1 \times 10^{-5}$ to 1 mol%.